



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,948	10/02/2003	Yasuyuki Shinkai	242388US2CONT	5892

22850 7590 05/10/2006

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

VILLALUNA, ERIKA J

ART UNIT	PAPER NUMBER
----------	--------------

2852

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

87

Office Action Summary

Application No.

10/675,948

Applicant(s)

SHINKAI ET AL.

Examiner

Erika Villaluna

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2003 and 02 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/964,584
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/2/03, 6/29/04, 9/23/04, 2/4/05, 5/2/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements filed on 6/29/04, 9/23/04, and 2/4/05, fail to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "57" has been used to designate both an opening and an applicator. Note Fig. 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement

Art Unit: 2852

Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 19-22, 24, 30-32, 34, 40-42, and 44 are rejected under 35

U.S.C. 102(b) as being anticipated by Rydelek et al., herein Rydelek.

3. Regarding Claims 19 and 30, Rydelek discloses an image forming method and apparatus, comprising: a main body having a receiving portion (portion where imaging units are removable from); a plurality of imaging units (image member cartridge including developing units 15, 16, 17, and 18), each imaging unit configured to develop electrostatic latent images with toner; a holding unit (31) configured to hold the imaging units and being detachably attached to the main body through the receiving portion; and a plurality of toner feeding devices (toner bottles 110, 111, 112, 113 with replenishers 63) provided separately from the plurality of imaging units, each toner feeding device including a toner feeding mechanism (63); wherein the plurality of toner feeding devices and the plurality of imaging units are detachably engaged to each other; and each of the toner

Art Unit: 2852

feeding mechanisms is configured to extend into and supply toner (fig. 2, 63 extends into openings 57 to supply toner) to a corresponding one of the plurality of imaging units.

4. Regarding Claims 20-22, 31, and 32, Rydelek discloses the toner feeding method and mechanisms are configured to protrude from the main body into the receiving portion (replenishers 63 protrude into developing unit 6) when extending into a corresponding one of the plurality of imaging units; and each imaging unit includes an aperture (fig. 2, openings 57) on a side surface of the imaging unit (openings 57 are located on the side portion of sumps 25-28, which comprise part of the imaging unit), to allow the toner feeding mechanism to extend therethrough. Note replenisher 63 and extended portion 59 in Fig. 7.

5. Regarding Claims 24 and 34, Rydelek discloses the method and apparatus wherein the plurality of imaging units comprise four imaging units (developing units 15-18 which are part of the imaging units) lined substantially in a row (fig. 4) in the holding unit.

6. Regarding Claim 40, Rydelek discloses an image forming apparatus, comprising: a plurality of developing means (developing units 15, 16, 17, 18 including sumps 25, 26, 27, 28) for developing electrostatic latent images with toner; holding means (31) for holding the plurality of developing means; attaching means for detachably attaching the plurality of developing means (col. 4, lines 18-21) to a main body through a receiving portion of the main body; and a plurality of supplying means (toner bottles 110, 111, 112, 113 with replenishers 63) for supplying toner to a corresponding one of the developing means, the

Art Unit: 2852

supplying means provided separately from the developing means (110-113 and 63 are separate from 15-18), each supplying means including a means for feeding (63), wherein the supplying means and the developing means are detachably engaged to each other (fig. 7), and each of the means for feeding toner extends into and supplies toner to a corresponding one of the developing means (each toner bottle and associated replenisher extends into each developing unit separately).

7. Regarding Claims 41, 42, and 44, Rydelek discloses the means for feeding toner are configured to protrude from the main body into the receiving portion (63 protrudes from the main body into 15, 16, 17, and 18) when extending into the developing means; wherein each developing means includes an aperture (fig. 2, opening 57) to allow the means for feeding toner to extend therethrough; and wherein the plurality of developing means includes four developing means lined substantially in a row in the holding means (15, 16, 17, and 18 are lined in a row within carriage 31).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 23, 33, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rydelek in view of Takano.

Art Unit: 2852

10. Rydelek discloses the invention as set forth above.
11. Rydelek does not disclose a sealing member.
12. Takano discloses a sealing member (34B) to prevent toner from exiting the imaging unit through the aperture (32A).
13. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the imaging unit of Rydelek with the sealing member of Takano for the benefit of preventing toner leakage when the toner feeding means is not engaged with the aperture.
14. Claims 25-29, 35-39, and 45-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rydelek in view of Chiesa et al, herein Chiesa.
15. Rydelek discloses the method and apparatus as set forth above and further, each imaging unit includes a developing device (15, 16, 17, and 18); and the four imaging units are configured to form cyan, magenta, yellow, and black toner images, respectively (col. 4, lines 11-17).
16. Rydelek does not disclose each imaging unit includes an image carrier, cleaning device, and a separate waste toner storage device. Rydelek also does not disclose the apparatus includes corresponding intermediate transfer device configured to transfer the electrostatic latent image.
17. Chiesa discloses including an image carrier (photoreceptor subassembly 74), cleaning device (cleaning subassembly 80) and waste toner storage (waste toner sump subassembly 82) included in and detachable from the process cartridge (CRU 44); and the apparatus contains an intermediate transfer device (fig. 1, transfer roller 92) corresponding to the image carrier.

Art Unit: 2852

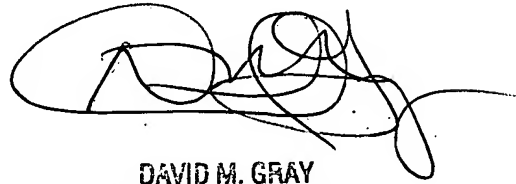
18. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process cartridges of Rydelek to include image carriers as in Chiesa for the benefit of increased ease of customer replacement. Note Chiesa, Col. 2, Lines 37-40. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the imaging units of Rydelek with the cleaning device of Chiesa for the benefit of increased image quality obtained through cleaning of the image carrier surface. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the imaging units of Rydelek with the separable waste toner storage units of Chiesa for the benefits of ease in removing or replacing only the waste toner storage unit once full.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erika Villaluna whose telephone number is (571) 272-8348. The examiner can normally be reached on M-F 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David M. Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2852

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'DAVID M. GRAY', with a large, stylized flourish extending to the right.

DAVID M. GRAY
PRIMARY EXAMINER

EV